On Demand business has rapidly taken off over the last two years. Businesses in every sector seek to better integrate their people, processes and data, to respond more rapidly to customer demands with slimmed-down business processes, supported by adaptive IT systems.

This has escalated Enterprise Business Integration (EBI) to become one of today’s two foremost priorities for CIOs and IT managers in 2004, and Security is the other. The 1990s had seen a profusion of proprietary point integration software emerge, aimed at linking parts of the complex, distributed IT environments companies had acquired in that decade. The post-2000 downturn shook out this fragmented business integration software market, and saw the emergence of a few broader business integration software suites, which attracted increasing market share – we chart the market dynamics of this large and fast-changing software segment.

In this White Paper, Software Strategies presents the evidence and the argument that business integration suites today must be deeply rooted in the twin central open software standards, J2EE™ for the dominant business software platform, and Eclipse now the pre-eminent applications development and integration tools open standard platform.

We review and assess leading EBI software vendors/platforms (TIBCO Software, webMethods, SeeBeyond, BEA Systems, Microsoft, SAP and IBM) against six over-riding meta-criteria that sharply delineate between vendors/products on their ability to meet the long-term needs of enterprise IT users with their EBI software suites.

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1. Business Integration Centre Stage as On Demand Flourishes

Introduction

From 2002, analysts and IT vendors heralded a fast-changing, unpredictable new business era. Here, enterprises respond instantly to fast-changing customer demands, business processes are optimized/integrated, and every process speeded up. Enterprises closely couple their people, transformed business processes and information to optimally support their whole value-nets, including partners, suppliers and customers. Costs are driven down via these leaner processes and automation. Many call this the On Demand era, a term that captures its need for speed, flexibility, adaptability and business agility. Others call it Real-Time Business. Business integration, the force that ties all these elements together, is therefore a main prerequisite for becoming an On Demand business. In this White Paper, e-infrastructure analysts Software Strategies takes a close look at the business integration software market, identifies the main criteria enterprises should use to select their strategic business integration software platform, and assesses select leading players in this important, rapidly-changing software market.

On Demand Enterprise – Rapid Take-off, But Challenging

On Demand has taken hold and is now a widespread market reality. Hundreds of leading companies and public sector organizations are already en route to becoming On Demand Enterprises. Leading “early adopters”, such as General Electric, eBay, Charles Schwab, Cisco Systems, and IBM itself, are all well-advanced in transforming their own businesses and systems, and strongly endorse this vision/direction. And the same forces and issues apply equally to Small and Medium Businesses (SMBs). Market/competitive pressures, in all vertical industries and global geographies, are forcing radical changes to enterprise strategies, business models, and core processes. Silos within the business must be broken down. New value and service for competitive differentiation must be offered to customers. The Information Technology (IT) applications that integrate and support the transformed processes must also change dramatically. This is the domain of business and systems integration.

Enterprise Business (& System) Integration at the Heart of On Demand

Achieving these rich On Demand benefits is challenging. Success demands far closer integration of people, processes and information horizontally across functions, and across the “extended enterprise” business network/ecosystem. Only by closely integrating all groups in their business models, processes and IT systems can enterprises become On Demand businesses.

---

![Business Integration: The Key Capabilities Needed](image_url)

**Business Integration: The Key Capabilities Needed**

- **People**
  - Standardised access to applications
  - Access anytime, anyplace
  - Dynamically adaptive role-based workplaces

- **Processes**
  - Model processes
  - Integrate applications
  - Connect externally
  - Monitor processes
  - Manage business results

- **Information**
  - Leverage data and content resources
  - Access data in place
  - Consolidate data
  - Transform data
  - Manage data placement

*Figure 1: Business Integration: The Key Capabilities Needed*
The business integration requirements for On Demand are depicted in Figure 1, which highlights the three predominant areas needing higher levels of seamless business integration.

- **People Integration:** All staff in extended enterprises need simplified, coherent access to all applications their roles demand. Whether working at fixed locations or mobile, vital applications and services must be accessible to all at any time and place. Portals, pervasive computing and dynamic e-workplaces provide these services. Electronic collaborations, including e-mail, SMS instant messaging, e-conferences and e-meetings, project rooms, and e-Learning, provide fast, low-cost, electronic channels that support these needs.

- **Process Integration:** Deep changes to core business transactional processes are needed. Business process modeling (to shape and scope the new processes), and systems and integration modeling (to shape and assemble new composite application workflows to support them) are vital. These new composite application are integrated, choreographed and assembled from existing transactional system components, ISV package components, new J2EE™ or .NET applications, supplier and partner systems, adapters, connectors, and middleware links (such as Integration, Event and Message Brokers). Connections to, and integration with, partner, supplier and customer's systems must be built or streamlined. Business process monitoring, and process management driven by business goal objectives, to manage the new processes, is the final requirement.

- **Information Integration:** The integration and sharing of access, across the whole business ecosystem, of all the critical data needed to support the redesigned collaborations and transactional processes, is a crucial third leg of the integration capability needed. It must also provide the data and information platform for business intelligence, reporting and analysis, which are vital for monitoring and controlling the transformed business processes.

EBI must also ensure security, and assure the integrity of all information, across what will usually be complex heterogeneous IT environments of diverse enterprise computing and software platforms, both old and new.

**Our Analysis – Unified, Comprehensive and Open Business Integration Technologies Essential**

Companies have moved beyond the traditional, within-functional (fragmented) process ownership, and many are now implementing process integration extending across functions. In this “horizontal” model, the whole business “owns” the new end-to-end business processes, with traditional functional organizations subordinate.

An example, creating a new supply chain management process that links sales, development and marketing functions, is shown in Figure 2. Constraints to date hindering such integration are shown on the left, and the newer integration technology advances that now enable it are shown on the right.
Business Performance Management is the industry term now used for the overall operation and optimization of core processes. Business Process Management (BPM) is needed to manage the new processes. Business analysts need to be able to "choreograph" together all the pieces and elements of the new process, validate and simulate its operation with test data, and to later compare simulated with actual results. Business Process and Integration Modeling (BPIM) technology now supports this need.

New tools to provide real-time monitoring of running business processes, for oversight and control, are needed. (Often termed Business Activity Monitoring, or BAM). Business managers must be able to adjust the process in the light of results rapidly and easily. New composite applications, described above, will support these new workflows. The creation, deployment and management of these composite applications must be supported by the business integration software run-time and application development environments, with minimum complex programming, rapidly and cost effectively.

These requirements present a challenging specification for the EBI software platforms that provide integration services across heterogeneous enterprise IT infrastructures.

These requirements present a challenging specification for the EBI software platforms that provide integration services across heterogeneous enterprise IT infrastructures. In this White Paper, we examine this large and growing software segment, its major players, and define over-riding criteria for selection of the right EBI software platform/vendor. (See Section 5.)

2. Business Integration Software

Market Consolidates – Vendor/Platform Choice Now Crucial

Market Consolidation & Concentration

The business integration software market has seen much consolidation/concentration. It first developed to offer point middleware to integrate the distributed systems, new ERP & CRM applications, Web and legacy systems, etc., that proliferated in the 1990s. Over 200 business integration vendors were active when the Internet boom peaked in 2000. Vendor revenues had grown strongly until then, but were hit hard by the business downturn following, when all IT spending dropped.

Larger vendors building-out broader business integration offerings seized the chance and bought up smaller vendors with innovative technologies, whilst other small vendors went to the wall.

Mid-sized, pure-play business integration ISVs hit financial troubles. The broader EBI suites of leading vendors seized increased market share, at the expense of point integration products from this multiplicity of smaller vendors. The EBI/Enterprise Application Integration (EAI) software license and closely-related services market reached $2.5B in 2003, and is expected to post substantial growth to reach $5.9B in 2009 (Source: WinterGreen Research: August 2004 EAI Report).

Business Integration Software

Distinct integration software categories, such as Business-to-Business (B2B) Exchanges, Enterprise Information Portals (EIP), EAI, Message Orientated Middleware (MOM), and Business Process Management (BPM) are now amongst the software falling within the business integration software segment today, reflecting the multiple technologies involved.

Business Activity Monitoring (BAM) and pre-developed business processes for key horizontal applications and vertical industries are important, more recent, additions Additional industry-specific elements, such as Swift gateways (banking), SITA gateways (airline messaging), Reuters or Bloomberg feeds (broking – real-time market data feeds), and others, are needed in specific industry sectors. Business integration vendors each came to market from different starting points, and so today offer widely different solutions, based on their individual histories.

A few comprehensive business integration suites aim to provide most capabilities in a single vendor stack. A powerful argument for such integrated single-vendor suites is that the vendor, and not the customer, does all the product integration. (Unlike with multiple point-product solutions, where the customer must “integrate the integration tools” before they can integrate their applications). This is an important point we return to in Section 5, but presents a formidable development and testing challenge for the vendors. It also increases customer dependence upon that vendor; so close scrutiny of the vendor’s long-term endurance becomes crucial.

Proprietary Integration Technology

Days are Over – Open Standards Vital

In the 1990s, and still for some integration vendors today, business integration software was/is largely proprietary. Standards were in flux, there were few alternatives, and so customers with urgent integration needs accepted what was offered.

The IT industry now agrees that Web services and XML open-industry standards best allow loose-coupled integration of like and unlike application components into new workflows. It is also near-universally agreed that most new enterprise applications built today (75% according to Gartner Group) are composite applications, described in Section 1.
Most agree a Service Orientated Architecture (SOA) is needed to support this new breed of loosely-coupled, Web services-based, composite applications running over the Internet, and that new Web services management and monitoring technologies must be provided. Vendors of broader EBI suites claim to provide the fabric, infrastructure or framework for such an environment.

Two areas of open-industry standards have clearly become mandatory/central for EBI software suites for medium and long-term success. These are:

- **The J2EE™ Software Platform:** There is now overwhelming evidence (see Section 3) that J2EE™ has now become the dominant enterprise software platform, with still rising momentum, and that successful EBI suites can only succeed if they are totally rooted in, built around, compliant with, and deeply supportive of J2EE™.

- **The Eclipse Platform:** Newer, but experiencing soaring adoption for compelling reasons (see Section 4), the Eclipse Foundation’s Eclipse Platform for open industry standard-based application development and integration tools, has now rapidly become the dominant global Application Development (AD) tools standard platform, with rocketing momentum. EBI suites rely heavily on a spectrum of ADI tools, and it is now evident only EBI suite vendors whose tools are built-out on Eclipse will survive, or be able to keep up.

Although marketing rhetoric and vocabulary may at first appear similar, there are in fact wide divergences of strategy, approach, and level of implementation, on these topics (as well as many other factors), between EBI players.

**Recovery Sees Flight to Quality in Business Integration**

The business integration sector shakeout that began with the dot.com bust continues to date as IT spending slowly improved from 2H 2003. In the downturn, enterprise customers resisted buying more niche/point integration solutions from smaller vendors lacking the staying power to support them long term. They had found the costs of supporting numerous point integration solutions, with their lack of common open standards, poor interoperability, and multiple vendors, onerous to deal with. Customers turned to larger business integration vendors, with broader and better-integrated business integration suites, some with stronger commitments to open industry standards and some with the sounder financial base essential for strategic long-term software platform providers.

Today, with IT investments moving forward, business integration, along with security, is rated the highest priority in most 2004 CIO surveys, and the flight to quality vendors/solutions (away from patchwork point solutions) is accelerating. Leading vendors gained ground/share from mid-sized and smaller players, and newer industry major entrants, notably SAP, BEA and Oracle, have aggressively ramped up their EBI efforts.

**Enterprise versus SMB BI**

There are two segments in the business integration software market: EBI (for the top 10,000 largest enterprise worldwide) and SMB BI (for the many-fold larger numbers of medium and smaller businesses). Whilst organizations of all sizes need business integration, and often need similar technologies, their priorities are different. EBI users require massive scale to support large global enterprises, high-availability and reliability, full support for the wide diversity of enterprise IT platforms in use and for their main software stacks (which must include mainframes, UNIX, Windows/Intel and Linux, ERP and CRM applications, etc). Rock-solid security is also essential. Large enterprises accept higher software costs and will buy professional services to assist with mission-critical integration projects. They demand a trustworthy long-term partner able to support them directly, provide a smooth roadmap, offer deep open-standards support, and they now demand vendor financial strength to endure long term in this difficult sector.

Small and medium enterprises also have mixed IT environments, and many similar business integration needs as they transition to the On Demand era, but on a smaller, simpler scale. Their IT platforms include more Microsoft Windows/Intel technology, and a lower applications/technologies diversity level. They need simpler, lower-cost, and easier to implement business integration software and solutions, with “out-of-the-box” plug-and-play components, priced within their budgets, and supporting their technology mixes. They are used to vendor channel partner support, and can only fund integration services help on a rather smaller scale.

Microsoft is the leading provider to the lower value (but rapidly growing) SMB BI software market, with its BizTalk Framework, BizTalk Server, Host Integration Server, and related Windows Server Platform infrastructure offerings. These offer a simplified, low-cost, packaged set of business integration offerings delivered through channel partners. This position reflects wide deployment of this Windows/Intel platform amongst SMB customers, and Microsoft’s early market entry.

IBM has now (May 2004) joined serious battle to challenge for the SMB BI sector with its June 2004 announcement of WebSphere Business Integration Server Express, the most recent of its successful Express SMB-focused middleware software offerings.

Our focus in this White Paper is on enterprise-level business integration.

**EBI – Select Leaders Introduced**

Figure 3 (on page 6) presents a concise overview of current EBI market leaders, together with select recent entries from other leading industry players.

This group includes three large vendors (IBM, SAP, and Microsoft) two of them more heavily focused on enterprise customers (IBM & SAP), three small-medium pure-play EBI vendors (TIBCO, webMethods and SeeBeyond), and one medium-size enterprise infrastructure ISV (BEA Systems).
<table>
<thead>
<tr>
<th>Vendor (Company Type)</th>
<th>Business Integration Software Offering (Segment) (Date announced in current form/release)</th>
<th>Vendor Revenue $M, Profit $M. (Latest FYE)</th>
<th>Enterprise Business Integration Market Position 2003/2004 &amp; Other Key Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>WebSphere Business Integration (Enterprise) (Dec 2003)</td>
<td>$89,131.0 $7,583.0</td>
<td>• Clear #1 EBI market leader at c 20% share of EBI SW market.</td>
</tr>
<tr>
<td></td>
<td>WebSphere Business Integration Express (SMB) (June 2004)</td>
<td>$11,242.0 IBM SW Group (FY 2003/12)</td>
<td>• Thousands of EBI customers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Now making strong play for SMB BI space.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Global Services market leader, with most extensive business integration services capacity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Strongest zSeries mainframe &amp; iSeries EBI solutions also on all major UNIX, Windows, and Linux platforms.</td>
</tr>
<tr>
<td>(Pure-play EBI ISV)</td>
<td>- Business Process Management</td>
<td></td>
<td>• Claims c 2,000 business integration customers (2004/08).</td>
</tr>
<tr>
<td></td>
<td>- Enterprise Backbone (Enterprise)</td>
<td></td>
<td>• Made 5 significant EBI acquisitions 1999-2004.</td>
</tr>
<tr>
<td>webMethods</td>
<td>webMethods Suite</td>
<td>$194.5 $-27.9 (FY 2004/03)</td>
<td>• Generally ranked # 3 in EBI SW revenue, with 11% share.</td>
</tr>
<tr>
<td>(Pure-play EBI ISV)</td>
<td>- Enterprise Service Platform</td>
<td></td>
<td>• Claims 1,100 EBI Customers (2004/8).</td>
</tr>
<tr>
<td></td>
<td>- Business Process Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Business Optimization</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Business Integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Enterprise Backbone (Enterprise)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Evolved over years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SeeBeyond</td>
<td>Integrated Composite Applications Network – ICAN 5.0</td>
<td>$137.8 $-27.5 (FY 2003/12)</td>
<td>• Generally ranked equal # 4 in EBI SW revenue, with c 8% share.</td>
</tr>
<tr>
<td>(Pure-play EBI ISV)</td>
<td>(Enterprise) (March 2003)</td>
<td></td>
<td>• Claims 1,910 EBI customers (2004/07).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• ICAN 5.0 superseded earlier SeeBeyond product offerings from March 2003.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Established 15 years, IPO April 2000.</td>
</tr>
<tr>
<td>BEA Systems</td>
<td>BEA WebLogic Integration 8.1™</td>
<td>$1,012.5 $118.7 (FY 2004/01)</td>
<td>• Generally ranked equal # 4 with around 8% share EBI SW revenue.</td>
</tr>
<tr>
<td>(Enterprise Middleware ISV)</td>
<td>(Enterprise) (March 2003)</td>
<td></td>
<td>• More recent entrant to EBI market.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Growing rapidly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Significant for BEA’s # 2 position in application servers (ASSP) &amp; deep J2EE™ commitment.</td>
</tr>
<tr>
<td>SAP</td>
<td>SAP NetWeaver 2004</td>
<td>$8,871.0 $1,356.8 (FY 2003/12)</td>
<td>• More recent entrant to EBI market.</td>
</tr>
<tr>
<td>(ERP Applications ISV)</td>
<td>(Primarily Enterprise) (May 2004)</td>
<td></td>
<td>• Significant because of SAP # 1 shares in ERP application software market.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Appeal is to heavily SAP-centric customers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsoft</td>
<td>BizTalk Framework</td>
<td>$36,840.0 $8,170.0 (FY 2004/06)</td>
<td>• Clear leader in SMB BI.</td>
</tr>
<tr>
<td>(Desktop, server platform ISV)</td>
<td>BizTalk Server Windows Server Platform, etc. (Majority SMB)</td>
<td></td>
<td>• Offerings run only on Windows/Intel platform.</td>
</tr>
<tr>
<td></td>
<td>(2001 onwards)</td>
<td></td>
<td>• Based on proprietary MS .NET programming model.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Appeal is to Windows-centric customers.</td>
</tr>
</tbody>
</table>

Figure 3: Leaders and Challengers in EBI Software 2004
Enterprise ISV Oracle Corporation ($10,156.0M revenues, $2,681.0M net income FY 2004/5) has recently been ramping up its business integration efforts in parallel with, and on the back of, its growing application server effort. The recent Oracle purchase of Collaxa adds a BPEL server foundation for BPM. Oracle’s EBI offerings are not yet fully formed/branded, but will play to its large base of Oracle-DB and applications-centric customers, where it is a strong market force, and will offer services opportunities for its consulting business.

**Application Server Software Platform (ASSP) Vendors and EBI**

Vendors offering widely market-adopted application server software platforms (IBM, BEA Systems, Oracle, Microsoft, JBoss, and Sun) have established large customer bases for their core ASSP platforms. They built-out extensive application development and systems management tooling, and developed deep expertise in, and support for, the programming model they use (.NET for Microsoft, J2EE™ for the others). All these (except JBoss) also have strong sales forces, and relationships with thousands of enterprises. Of these ASSP vendors, Oracle has only just got started, and Sun and JBoss are not very active in EBI.

The above elements are also crucial ISSP foundations for EBI. The two lines of products are sold to the same customers, on the same computing platforms. Vendors offering both ASSP and ISSP product suites can therefore achieve close synergy, coupling, and development sharing by building a unified ASSP and ISSP combined suite, with unified development tooling. By contrast, pure-play vendors seeking to be ASSP-neutral and/or to support multiple ASSPs are spreading their development and support effort thinner. Arguably, they cannot expect to attain the depth of support and closeness of integration as the former group, over the multiple ASSP environments they support.

We expect that this fundamental advantage, plus such vendors’ superior scale and resources, will see this group of EBI vendors gain further share from the pure-play vendors over time.

**Our Analysis**

Many strands and segments of integration software technology have come together into the category now known as EBI. There has been considerable vendor and product consolidation and concentration in this previously fragmented sector, with numerous acquisitions of smaller vendors and business failures, over the last few years.

A small group of vendors offering more complete and integrated EBI suites leads the market by software revenue share, and are gaining ground as customers seek quality and security in a turbulent software sector. We introduced and profiled the principal players in this segment: IBM, TIBCO Software, webMethods, SeeBeyond, BEA Systems, SAP and Microsoft, and look more deeply at how best prospective customers can compare and evaluate their offerings in Section 5.

We argued strongly that in EBI, more than in any other software category, open-standards play a quite disproportionately crucial role in enabling the integration, inter-operation and freedom from proprietary lock-in that are essential. In particular, we argued that two particular open-standard platforms, J2EE™ and the Eclipse AD tool platforms, were now the dominant and thus mandatory open standards for EBI, and present the evidence for this in Sections 3 & 4 next. The movement away from proprietary software platforms is strongly evident and represents a crucial decision point for customers.

The business integration software and closely related services market was around $2.5B in 2003, and is expected show strong growth to double over the next five years. About 80% of the business integration market is the EBI segment (the focus of our White Paper), but the SMB BI segment (20% in 2003) is showing faster growth. IBM is the acknowledged leader in the EBI segment and is now challenging in SMB BI, where Microsoft is the clear leader.


**J2EE™ Introduction**

The Java™ programming language, and specifically Java™ 2 Enterprise Edition (J2EE™ – its high-end model), has become the definitive programming model/software platform for building/deploying new enterprise-class, Web-based server applications, and today holds a substantial 80% market share for such new developments.

Supported on most enterprise server platforms/operating systems, J2EE™ provides powerful, high-level facilities for building new-generation applications that are completely portable. The J2EE™ platform simplifies enterprise applications by basing them on standardized, modular components, by providing a complete set of services to those components, and by automatically handling many details of application behavior without complex programming.

J2EE™ exploits Java™ 2 Platform Standard Edition (J2SE) features such as portability, the JDBC API for database access, CORBA technology for interaction with existing enterprise resources, and a security model that protects Internet applications data. J2EE™ then adds support for Enterprise JavaBeans™ components, Java™ Servlets API, JavaServer Pages and XML technology. The J2EE™ standard includes complete specifications and compliance tests to ensure portability of applications across all enterprise systems supporting the J2EE™ platform. The J2EE™ specification now also ensures Web services interoperability through support for the WS-I Basic Profile.

The J2EE™ platform’s widespread success and adoption, by most leading industry vendors, a substantial majority of enterprise IT users, and a growing roster of leading ISVs, has now clearly made it today’s de facto open standard software platform.
Why J2EE™'s Powerful Market Momentum?

The reasons driving this strong J2EE™ adoption momentum are clear. J2EE™ won de-facto standard status through the strength and depth of capabilities that it offers for delivering secure, robust, scalable, multi-platform applications and Web services. Through the multi-year collaborative development contributions from leading enterprise software industry vendor partners, participating in the J2EE™ effort through the Java™ Community Process (JCP), the platform now offers a rich depth of capabilities and full maturity. J2EE™ brings compatibility and portability of applications over all the major J2EE™ supportive server platforms: Java™ technology originator Sun Microsystems terms this Java’s “Write Once, Run Anywhere” (WORA) capability. Developers can write enterprise applications to the J2EE™ specification, and companies can purchase ISV J2EE™ applications being quite sure that they are portable across all the J2EE™ compatible products available today. J2EE™ is rooted in open industry standards, and now (SDK 1.4) includes strong support for Web services and XML, which are the keys to next-generation business and systems integration and composite applications under SOAs. With the addition of interoperable Web services and other new features in Version 1.4, the J2EE™ platform will be the industry standard for enterprise solutions for the medium-term future at least. Figure 4 provides our summary of the facts of J2EE™’s strong market momentum.

Java™ development skills have now become widely available

Java™ Skills Now Widespread, Pool Growing Fast

Java™ development skills have now become widely available, both amongst enterprise software development and service provider staffs, and their salary/fee costs have normalized, with over 3 million Java™ developers estimated to be working today. Most young people leaving college with IT training today are now taught Java™, and are eager to apply their knowledge in the workplace, so these already large Java™ programming resources are increasing rapidly.

Most New User & ISV Enterprise Applications and Components now Built on J2EE™

Most new enterprise software components and new applications are therefore now being built on J2EE™, which supports Web services for integration and loose coupling with other non-Java™ software components in new composite applications. Many leading ISVs are now also writing their new applications on the J2EE™ platform, both because of its de facto standard status and strength, and for the high-degree of portability it provides, and this has created a rapidly growing pool of J2EE™-based ISV business solutions. 2004
J2EE™ is the single standard that alone can sit on top of a wide range of existing enterprise systems elements

Our Analysis – J2EE™ the Vital Foundation for BI

J2EE™ is the single standard that alone can sit on top of a wide range of existing enterprise systems elements – database management systems, transaction monitors, naming and directory services, and more, and so the J2EE™ platform can best break the inherent barriers between current enterprise systems. The unified J2EE™ standard wraps and integrates all such existing resources required by multi-tier applications with a unified, component-based application model. This enables the next generation of components, tools, systems, and applications for solving the strategic requirements of the enterprise.

The J2EE™ specification also supports emerging Web Services technologies through inclusion of the WS-I Basic Profile. WS-I Basic Profile compliance means that the developers can build applications on the J2EE™ platform as Web services that inter-operate with Web services from non-J2EE™-compliant environments. The main critique of J2EE™ is that Sun Microsystems continues to control the platform and resists calls to move J2EE™ fully to Open Source, but in practical terms, the JCP has worked rather well to harness deep industry collaboration around J2EE™.

4. Eclipse Open Standard AD Tools

Introducing the Eclipse Foundation

Eclipse began as a consortium to host community Open Source projects, formed in 2001 when IBM released the Eclipse Platform into Open Source. The Eclipse Foundation was incorporated as an independent, not-for-profit, membersupported organization in early 2004. Its mission is to advance the creation, evolution, promotion, and support of the Eclipse Platform. It cultivates an Open Source community and an ecosystem of complementary products, capabilities, and services. In only 3 years, this community has delivered the most broadly deployed, fastest growing, universal tool integration platform in the industry. All technology/source code in Eclipse’s ecosystem is openly available and royalty-free. Material support from the currently 59 member companies enables Eclipse to host major Open Source projects (4 top-level projects and 19-sub-projects to date) in this area.

The Eclipse Platform – Release 3.0 Landmark

The Eclipse Platform is an award-winning universal platform for tools integration, software modeling and testing. It is designed for building Integrated Development Environments (IDEs). These may be used to create applications like Web sites, embedded Java™ programs, C++ programs, and Enterprise JavaBeans™ (EJBs) applications. Eclipse-based solutions give developers greater freedom of choice in a multi-language, multi-platform, and multi-vendor-supported environment. The Eclipse Platform provides a dynamic plug-in-based framework that makes it easier to create/integrate technology, saving time and money.

By collaborating and sharing core integration technology, technology providers can concentrate on their unique areas of expertise and differentiation. The Eclipse Platform is written in Java™ and comes with extensive plug-in construction toolkits and examples. It has already been deployed on a range of development workstations, including Linux, QNX, Mac OSX and Windows-based systems. The Eclipse Platform is designed and built to meet the following requirements:

- Support the construction of a variety of tools for application development.
- Support an unrestricted set of tool providers, including ISVs.
- Support tools to manipulate arbitrary content types (e.g., HTML, Java™, C, JSP, EJB, XML, and GIF).
- Facilitate seamless integration of tools within and across different content types and tool providers.
- Support both GUI and non-GUI-based application development environments.
- Run on a wide range of operating systems, including Windows® and Linux™.
- Capitalize on the popularity of the Java™ programming language for writing tools.

The Eclipse Platform offers tool providers mechanisms and rules that deliver seamlessly integrated tools. These mechanisms are exposed via well defined APIs, classes, and methods. The Platform also provides useful building blocks and frameworks that speed new tools development. With Eclipse Release 3.0 (June 2004), the Platform now extends its sophisticated object-oriented development technologies to support a Rich-Client Platform (RCP) that enables construction of desktop applications.

Speaking of Eclipse 3.0, Lee Nackman, Vice President of Desktop Development Tools and CTO of Rational Software, IBM Software Group, said: “We are very excited about the many benefits that Eclipse 3.0 will bring to our customers, and are proud of the leading role IBM developers have had in bringing it to the industry. IBM is now working towards a release of Eclipse 3.0-based products of our market-leading Rational tools and Lotus collaboration solutions.”
Why is Eclipse So Important?

For thirty years, hundreds of vendors created a wide range of application development tools, IDEs, and related team development, testing and modeling tools for building enterprise, desktop and embedded applications. Earlier, most of these tools were entirely proprietary, supporting only their vendor’s or popular programming languages, operating systems, database systems, TP monitors, and hardware platforms, etc. There was no commonality/interoperability between them.

This meant that tool users had to deploy many inconsistent and incompatible tools to support development across increasingly heterogeneous environments, an effort costly in both AD software licenses and in the diverse staff skills needed. As programming languages became standards-based, and other application infrastructure standards emerged (such as SQL for programmatic access to relational database, TP standards, GUI standards, XML, and most recently Web services, etc.), most tool vendors adapted their AD products to support these external common standards. However, there were no common standards or core platforms for the development of the tools themselves, and thus little community synergy, collaboration or integration between tools from different vendors.

During the late 1990s, when IBM was investing heavily to build-out its Software Group middleware portfolio, a focus was creating a new generation of modern, integrated, and unified AD tooling. At the time, the firm also had a diverse set of AD tools for different tasks based on varying technologies. The giant had by then adopted/standardized on J2EE as its future enterprise software platform. IBM first conceived the concept of an open, standard-based development tools platform that could unify and underpin its own new range of tools, in particular for Java™/J2EE™ development. This, IBM figured, would slash its own development costs, make all of its tools far more consistent to users, would allow superior tool integration, and support plug-ins from third-party vendors to enrich its suite’s capabilities. This would improve customers’ development and software maintenance productivity, reduce its development cycle times, and cut costs.

IBM further realized that an open industry-standard platform to build development tools was sorely needed. This was the genesis of the Eclipse Platform. IBM developed the original Eclipse Platform, and built out its own flagship WebSphere Studio AD tools family on Eclipse, and has since moved most of its other AD tool products onto the Eclipse base.

Impressed by the tremendous, already clear success of the Open Source model with Linux, in November 2001 IBM implemented the radical and farsighted decision to donate its Eclipse Platform to Open-Source. IBM encouraged and supported the formation and development of the Eclipse consortium, which in 2004 became the Eclipse Foundation, described above.

Accelerating Eclipse Industry Adoption Brings Leading Position Today

The Eclipse effort has seen extraordinarily broad, rapid success across the AD software industry. It has delivered valuable benefits for both tool developer and tool users/consumers. In under three years, membership has soared to almost 60 organizations, including industry giants/leaders like IBM, Intel, HP, SAP, SAS, Hitachi, Fujitsu, Oracle, Sybase, Rational, Red Hat and SuSE (Novell).

The number of Eclipse-based products and add-ins now available is climbing rapidly. (40+ member vendors already announced add-ins). Our summary of some important facts structures, participants, adoption metrics, and focuses of this successful community are shown in Figure 5 (on page 11).

The strong benefits of collaborative, industry-wide innovation and development on Open Source, and of building tools on an open, extensible, modular and standards-based tool-building platform, are compelling. The broad adoption of Eclipse by commercial vendors, academic institutions and open technology developers has been astounding, and well beyond original expectations. Today, Eclipse projects address not only Java™/J2EE™ development, but also COBOL and C++ language AD tools requirements. They also address enterprise server-side development and rich-client applications, as well as embedded systems AD tools. With four top-level Open Source Projects and 19 Sub-projects today hosted by Eclipse, this buzzing community has become the dominant standard for open application development tools technology, and the hub of Open Source efforts in AD. High interest in Eclipse was also shown at the first “EclipseCon 2004” conference, which drew 634 paid attendees from 226 companies and 23 countries, exceeding all expectations.

Five Eclipse membership types, shown in Figure 5, allow all types of organizations with an interest in AD tools standards to participate, and a 12-person board is structured to represent the main groups of Strategic Developers, Strategic Consumer, Add-in Providers and Committer Members (Project leads).

Our Analysis – Eclipse Now the Dominant Open AD Standard – Central to Business Integraton

Eclipse has one direct market competitor in the Sun NetBeans effort centred on Java™ development (which has seen a much more limited uptake, largely because of Sun’s tighter control, and its much narrower focus). Most analysts regard NetBeans as a “too little, too late” effort and unlikely to take flight. There is also the indirect competition of Microsoft. Microsoft’s Visual Studio development environment, which supports its .NET programming model (the competitor to J2EE™), is a significant tools market force.
Eclipse – Now Dominant Open AD Tools Platform

Eclipse Foundation
- Now independent, staffed organisation
- Not-For-Profit
- Hosts Open-Source AD Projects
- Royalty-Free Software
- Common Public License
- 12-person Board guides

Eclipse Open - Source Projects
- The Eclipse Project
- The Eclipse Tools Project
- The Eclipse Technology Project
- The Eclipse Web Tools Platform Project
- With 19 active Sub-Projects

5 Membership Types
- Strategic Developers
- Strategic Consumer
- Add-In Providers
- Committee Member
- Associate Member

Now dominant industry de-facto standard open development tools integration platform
Definitive foundation for business integration, composite applications, Web services & SOA tooling integration

Eclipse – Now Dominant Open AD Tools Platform

Whilst supporting some important open-industry standards, the Microsoft solution is only for the Windows/Intel platform environment. It is also largely a closed, proprietary development ecosystem. In this, third-party tool developers participate only on the terms that Microsoft permits, and at risk of their niche being subsumed by the Redmond giant’s developments. Despite Microsoft’s muscle, they are not invincible in the AD tools space. Just as they have been unable to stop Java, J2EE™, and Linux from taking hold, they are now feeling the pressure from Eclipse too. We expect that they will soon have to align themselves with Eclipse.

...it is easy to see why Eclipse has won such widespread industry support so rapidly, to reach its current dominance as the preferred open AD tools standard platform/development focal point.

Given these options, it is easy to see why Eclipse has won such widespread industry support so rapidly, to reach its current dominance as the preferred open AD tools standard platform/development focal point. Major J2EE™ infrastructure software provider BEA Systems, long on a go it-alone track with its proprietary WebLogic Workshop tooling, continues to reject Eclipse membership and the Eclipse Platform.

It did, however, make a 28th June 2004 announcement at JavaOne that it would team with Instantiations Inc. (an Eclipse Member) on a new Eclipse Foundation Open Source incubator project, “Pollinate”, to create an Eclipse-based development environment and toolset. Eclipse Pollinate, which will be designed to integrate with Apache Beehive, the industry’s first easy-to-use, cross-container, open-source application framework for building SOAs and enterprise Java™ applications, is being developed to help enable developers more easily develop and deploy service-based and J2EE™-based applications. Most analysts see this move as a BEA attempt to promote its proprietary WebLogic Workshop as a basis for “Pollinate”, but an attempt we consider unlikely to succeed.

Business integration makes especially strong demands for more integrated and open-standards tooling, to support the various types of modeling and development activity now involved in choreographing new business processes, assembling, and testing new composite applications loosely coupled by Web services under SOAs. Yet, much of the integration tooling introduced by early business integration vendors was entirely proprietary. With the complexity of today’s typical distributed heterogeneous enterprise IT environment, business integration absolutely demands integrated and open standards-based tools that work well together.
It especially needs the many innovations and advances that only an open community of developers can contribute, to support the continuing large wave of EBI projects in all their diversity. There is no doubt, in our opinion, that Eclipse is the best open-tools platform for business integration, for all the strengths and broad adoption reasons above.

We would strongly counsel customers considering the purchase of new EBI software suites to avoid candidates whose tooling is not already implemented upon the Eclipse platform, or is well en route to be so.

5. Choosing Your EBI Software Partner

Our Analysis – Crucial Meta-criteria for EBI Vendor Selection

Most software vendor/product selection guides begin with detailed product descriptions and extensive feature-function comparisons, and this remains an important aspect of selection. However, in the complex, fragmented, fast-changing and evolving sector of EBI, there are over-riding “meta-criteria” that should be deeply explored for each candidate vendor, well before detailed functional comparisons are made.

These “meta-criteria” are uniquely important in EBI software, with its complex web of hardware platforms, operating systems, software platforms, open industry standards, extensive AD tooling requirements, and given the long-term foundation role such software will now play in supporting the enterprise’s new mission-critical systems for the next decade. Our six essential meta-criteria are:

1. Depth, Duration and Extent of J2EE™ Support in an EBI Suite.
4. EBI Suite Vendor’s Record on Roadmap Discontinuities Affecting Their Customers.
5. EBI Suite Richness/Quality of Adapter/Connector, Pre-developed Business Processes & Solutions Ranges.

In this Section, we explain why each of these meta-criteria are vital in customer EBI suite/vendor pre-selection, and assess and evaluate six leading players against them.

Open Standards Criteria

1. Depth, Duration and Extent of J2EE™ Support in an EBI Suite

As we showed in Section 3, there is no doubt that J2EE™ has now become the 80% dominant software platform for new enterprise applications, and is gaining further momentum yearly. We consider the depth, duration, and extent of an EBI vendor’s immersion in, contributions to, and support throughout their EBI product suite, for J2EE™ is therefore an overriding criterion. In our view, only those EBI vendors with years of experience and expertise in all the aspects of the J2EE™ platform and with fully proven J2EE™-Certified platform implementations beneath all or most of their EBI suites, can expect to stay on the leading-edge of this intersection. There are wide differences between leading EBI vendors on this criterion.

2. Commitment to/Implementation on Foremost Open Industry-Standard ADI Tools Platform – Eclipse

EBI needs several types of new-generation tooling. These new tools must clearly work well with one another throughout the integration development lifecycle. There are powerful benefits for end customers and EBI tool providers alike if this integration tooling is itself based on a common, open industry-standard AD/ADI tools platform. Such a platform benefits hugely from the shared innovation and contributions of numerous industry participants. One platform has rapidly emerged to unquestionable leadership in only three years, and can alone deliver these valuable benefits. That platform is Eclipse from the Eclipse Foundation. In Section 4, we summarized the extraordinary and rapid success of Eclipse. The EBI market had mostly to-date evolved its tools repeating the same strategic error made elsewhere earlier in the general AD tools market. In most cases, individual vendors built their own entirely proprietary tools. We consider that those EBI vendors that have based all their EBI tooling on Eclipse have an unbeatable advantage in the rate of development, rapid innovation and lower costs than EBI vendors persisting alone with proprietary offerings do. There are wider differences between leading EBI vendors on this criterion.

Indeed, our strong recommendation today is not to consider EBI vendors whose EBI tooling is not fully based on the Eclipse Platform.

Figure 6 (on page 13) shows our positioning of the six vendors, plus others, on the twin axes of the extent of the EBI vendor’s migration to commitment and depth of experience with these two central open standards of J2EE™ (horizontal axis) and Eclipse (vertical axis).
Microsoft: Obviously scores zero on both meta-criteria, with its own, entirely proprietary AD tools platform (Visual Studio), and no J2EE™ base for its business integration offerings, rather using its own proprietary .NET programming model and software platform.

TIBCO Software: Largest of the pure-play EBI vendors, TIBCO is not an Eclipse Foundation member, has none of its EBI development tools on the Eclipse Platform, remains on entirely proprietary tooling, and so scores a zero open AD platform rating. TIBCO is a Sun Microsystems J2EE™ Licensee, but has no Sun J2EE™-Certified EBI products. It offers some J2EE™ support, but its depth of support is ranked lower here. Its newest acquisition – now TIBCO Staffware BPM – for example, is neither CORBA nor J2EE™ based.

webMethods: webMethods just recently (March 2004) joined the Eclipse Foundation, has announced Eclipse Add-in products but, as yet, its main EBI AD tools are still on its proprietary technology platform. The firm expects to have more of its tools on Eclipse by the end of 2004; it gains higher open AD standards rating for this Eclipse direction. Like TIBCO, webMethods is a Sun Microsystems J2EE™ Licensee, but also has no Sun J2EE™-Certified EBI products. It has also recently incorporated the JBoss Application Server (which is SDK 1.4 Certified) into its offering. Accordingly, we rank it medium for its J2EE™ support and experience.

SeeBeyond: SeeBeyond is not an Eclipse Foundation member, has none of its EBI development tools on the Eclipse Platform, remains on entirely proprietary tooling, and so scores a zero rating for open AD standards support. SeeBeyond is a Sun Microsystems J2EE™ Licensee, and has successfully Sun J2EE™-Certified its ICAN 5.0 EBI suite at the previous SDK 1.3 level in 2003 (the first pure-play EBI vendor to achieve this feat). Accordingly, and for this stronger J2EE™ commitment and experience, it receives a respectably high J2EE™ ranking.

BEA Systems: BEA Systems has refused to join the Eclipse Foundation, has none of its EBI development tools on the Eclipse Platform, and so its well-regarded WebLogic Workshop AD and integration tools are still entirely proprietary. It is, however, participating in the Eclipse-led “Pollinate” tools project. It thus scores a low ranking for open AD standard support. BEA is a long-standing Sun J2EE™ Licensee, has Sun J2EE™-Certified its WebLogic Application Servers Versions 7.0 and 8.1 at SDK 1.3 (but not yet at the latest SDK 1.4). Its depth and length of experience and commitment to J2EE™ ranks equal highest.
Figure 7: Software Strategies EBI Vendor Financial Strength Rating

- **SAP**: SAP, a newer entrant to the EBI arena than some of the above, has been an Eclipse Foundation member since December 2002, and its NetWeaver 2004 tools are built on the Eclipse Platform, so it scores the second highest rating on open AD tools standard support. SAP is also a Sun J2EE™ Licensee, and has its SAP Web Applications Server Sun J2EE™-Certified at SDK 1.3 level, and has a solid record of J2EE™ support and experience.

- **IBM**: Created and developed the Eclipse Platform, donated it to open-source, now has all its primary AD and EBI tools on the Eclipse Platform, and obviously has the longest and deepest experience with the technology, so rates a clear highest ranking by a wide margin. IBM has also been a long-standing Sun J2EE™ Licensee, has its WebSphere Application Server 5.1.1 Sun J2EE™-Certified at the latest SDK 1.4 (and previous levels) has a massive, longstanding resource commitment to J2EE™, and is a central contributor to the JCP development process. IBM rates a highest ranking on this factor.

We cannot overstate the importance to customers' future EBI platform investments of these two principal standards, and the conclusions as to vendor selection are self-evident from Figure 6.

3. **Vendor Financial Strength and Staying Power, Vital for EBI Suite Customers**

As described earlier, the EBI sector saw much turmoil and consolidation before and since the 2000 turndown. In the 1990s, when customers still bought tactical, “quick-fix” point integration solutions – for example, to experiment with e-business projects – vendor stability and longevity were often secondary. However, EBI suites have clearly now become core enterprise IT infrastructure software foundations that will underpin the next generations of mission-critical, enterprise-scale, composite applications. Customers will want to run these safely and securely for at least the next decade. Prospective customers must therefore rigorously assess the financial strength and performance record, long-term technology support capability, and overall risks of choosing a specific EBI suite vendor. Enterprise software customers have long applied these crucial tests when making similar past strategic software platform investments in, for example, database systems, application servers and enterprise applications, where the same considerations have long applied. We therefore include a financial and “investors perspective” analysis on the financial strengths of these vendors in Figure 7 above.

Our detailed Financial Strength Ratings of the EBI vendors covered are developed (based on their latest available and published official results), explained and presented in detail in Appendix A, and the “bottom line” synthesis/summary of this detailed analysis is shown in Figure 7 above.

4. **EBI Suite Vendor’s Record on Roadmap Discontinuities Affecting Their Customers**

Integration is a type of application development, and customers invest many times more in their own integration application development projects than the cost of the integration software. Where these developments create large applications running the transformed core new business processes of large enterprises, customers detest disruptive product road map discontinuities from their integration software vendors that force them to rework or replace this large investment. Despite this obvious and compelling truth, this is exactly what scores of customers of some mid-sized business integration vendors have actually experienced in the past. Most frequently, this occurred where newly acquired components replaced originals, as firms rushed to build-out their suites by the acquisition route, but failed to engineer upgrade paths from the discontinued line. The effect in each case was that large customer investments in applications had to be written off or costly rework performed. From vendor roadmap and acquisition history reviews and enterprise customer comments, we have depicted our comparative assessment of how the six EBI vendors are positioned on this important consideration. This is shown, with examples of specific cases, in Figure 8 (on page 15).

Larger enterprise vendors know better than ever to offer anything but seamless upgrade paths/migrations that preserve their customers’ investments over technology changes. It is a mark of a barely maturing EBI market that such upheavals have occurred, at high cost to customers. It is not a matter of vendor size, more one of an enterprise customer investment protection mindset. Of leading general software platform providers, for example, giant Microsoft has a poor record in this regard. Over its journey from COM to COM+ to DCOM to .NET, and from NT to Windows 2000 to 2003 to 2005 and next to Longhorn, there have been several such costly discontinuities, with another to come. This diminished the firm’s “enterprise provider” credibility in the eyes of the CIOs who have suffered its effects on their own Microsoft-based enterprise applications. Nor is it a necessary consequence of an acquisition-driven strategy: IBM, for example, has acquired a number of vendors in its EBI suite build-out, but without disruptive road map transitions for its customers.
Prospective customers can use a simple “acid test” to validate prospective vendors’ stance on this crucial question. Ask them for written warranties that (for say 5-10 years) customer applications built on their EBI platform will not be rendered obsolete or require substantial rework because of road map changes. The EBI vendor contract should have them bear the full rework cost, or carry out the re-mediation or migration work for the customer at their expense, if this occurs.

5. EBI Suite Richness/Quality of Adapter/Connector, Pre-developed Business Processes & Solutions Ranges

In EBI, every customer’s existing environment will be different. EBI is a form of application development, and every right-minded customer will wish to:

(a) Be sure that their chosen EBI suite supports the maximum number of integration “touch points” with their unique environment, and that each adapter/connector needed is robust, well-proven, complete and reliable.

(b) Minimize their own new integration development time and cost by plugging in and using well-proven pre-existing, best practice-based business process components to their new developments, or using proven integration solutions, rather than having to build them all from scratch.

Some vendors who promote a wide range of horizontal and vertical solutions, in reality offer little more than their standard infrastructure products and adapters plus some experience.

We therefore recommend in-depth consideration of the breadth, depth and strengths of the vendor’s range of adapters and connectors against the full future range of integration points required of the EBI suite by the enterprise, and testing of the crucial ones. We also recommend thorough assessment of the vendor’s portfolio strength in both horizontal and vertical industry-specific, pre-developed processes and solutions. A rich inventory of choice here greatly reduces individual customer time, cost, effort and risk where such pre-defined and developed process or solution element can be quickly deployed in the customer’s business process transformation. Some vendors who promote a wide range of horizontal and vertical solutions, in reality offer little more than their standard infrastructure products and adapters plus some experience. Prospective customers are therefore advised to probe deeply into the exact value-add of “solutions” offered that appear relevant to their needs. See Figure 9 (on page 16) for our Adapter/Connector and Pre-defined Process Ratings.
<table>
<thead>
<tr>
<th>Meta-criteria for EBI Vendor – Product Selection</th>
<th>TIBCO Software</th>
<th>webMethods</th>
<th>SeeBeyond</th>
<th>BEA Systems</th>
<th>SAP</th>
<th>Microsoft</th>
<th>IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type/ Value Proposition</td>
<td>Pure-play EBI Infrastructure &amp; Solutions</td>
<td>Pure-play EBI Infrastructure &amp; Solutions</td>
<td>Pure-play EBI Infrastructure &amp; Experience</td>
<td>Infrastructure SW. Unified ASSP &amp; ISSP Platform &amp; Experience</td>
<td>Enterprise Applications SW + ASSP &amp; ISSP Platform</td>
<td>Windows Infrastructure SW. Unified ASSP &amp; ISSP Platform</td>
<td>Infrastructure SW. Unified ASSP &amp; ISSP Platform, Processes &amp; Solutions</td>
</tr>
<tr>
<td>1. Depth of J2EE™ Support</td>
<td>Low-Medium</td>
<td>Low-Medium</td>
<td>Medium-High</td>
<td>Very Strong</td>
<td>Strong</td>
<td>None</td>
<td>Highest</td>
</tr>
<tr>
<td>2. Eclipse Open AD Tools Support</td>
<td>None</td>
<td>Recent (March 2003) Convert. Some tools on Eclipse</td>
<td>None</td>
<td>None</td>
<td>Strong. Main EBI tools on Eclipse</td>
<td>None</td>
<td>Highest Level of Eclipse Support</td>
</tr>
<tr>
<td>4. Disruptive EBI Product Road Map Record</td>
<td>Poor Record. Staffware next?</td>
<td>Poor Record</td>
<td>Reasonable Record. ICAN 5.0 a big jump</td>
<td>Sound Record</td>
<td>R/2 to R/3 Disruptive. Sound Since</td>
<td>Poor General Record. EBI Sound</td>
<td>Excellent Record, Both EBI and Other SW</td>
</tr>
<tr>
<td>5.1 Range of Adapters</td>
<td>Widest Range 172 Adapters</td>
<td>Fair Range 37 Adapters</td>
<td>Strong Range 80+ Adapters</td>
<td>Strong Range 68 BEA &amp; 20+ Partner</td>
<td>NA</td>
<td>NA</td>
<td>Strong Range 65+ Adapters.</td>
</tr>
<tr>
<td>5.2 Range of Pre-developed Processes</td>
<td>Not Allowed by Architecture</td>
<td>Not Allowed by Architecture</td>
<td>Not Offered</td>
<td>Not Offered</td>
<td>Not Offered</td>
<td>Not Reviewed</td>
<td>-100+ WBI Collaborations in 14 bundles</td>
</tr>
</tbody>
</table>

Figure 9: Software Strategies EBI Vendors/Suites Meta-criteria Ratings Summary
6. Consider the Technological Reason Why Size Really Does Matter in EBI

There is another compelling technical/developmental reason why this software sector, more than any other, requires enduring vendors to deploy major development and financial muscle. EBI suites must provide long-term, current release support for:

- Multiple hardware platforms and operating systems.
- Often multiple software platforms and ASSPs.
- J2EE™ and .NET platform levels and Web services levels and generations.
- A wide range of other, often still-rapidly-evolving open industry standards.
- Scores of popular enterprise applications.
- Connector support for many other existing environment software infrastructure elements (DBMS, ASSP, TP, etc.).

Each element above advances through new releases/extensions. EBI suites contain scores of software modules/components that support integration with each above “touch point”. When the number of possible combinations of EBI suite configurations, and the range of past, current and new “touch point” releases that must be supported are considered, the combinatorial explosion of configurations, that must all be tested before packaging becomes huge.

We estimate that the testing and validation of such EBI suites can absorb 50% or more of vendor total R&D resources, more than two and a half times the software industry average of around 20%. Ask to see how your candidate vendors handle, synchronize, and, most importantly, test and validate all these elements and combinations for their new suite releases, and weigh this against the maintenance fees they are asking, and their R&D spend levels and resources. See Figure 9 for our Ability to Sustain R&D and Testing of Complex EBI Suite Software Long-term Ratings

**Our Analysis**

Summarizing our findings on these six crucial meta-criteria for EBI suite vendor assessment, Figure 9 combines all our Ratings for the six vendors in one table.

The findings summarized in Figure 9 (on page 16) are largely self-explanatory, and highlight the significant differences of approach, type of EBI offering, standards support, financial strength, and the richness of adapters/pre-canned processes/solutions offered, and our assessment of their EBI R&D/testing sustainability. The three sub-criteria of 5, in particular, would require scores more pages to present in detail here, but are important to specific customers, where the availability of all the right adapters, pre-tested processes and/or highly relevant proven solutions would greatly cut integration time and effort.

Two pure-play vendors, TIBCO and webMethods, offer both EBI infrastructure and strong solutions portfolios. TIBCO is strong in Financial Services, Telecommunications and Energy, while webMethods is well represented in High Technology, Consumer Goods and Automotive/Aerospace.

Two vendors offer primarily EBI infrastructure software plus their experience in its deployment, SeeBeyond, a pure-play EBI vendor, and BEA Systems offering a combined ASSP & ISSP infrastructure platform, each have much lower solution emphasis.

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**EBI market leader IBM provides a unified ASSP and ISSP platform, a rich set of pre-designed processes, a large horizontal and industry solution portfolio, and scores strongly across the board.**

EBI market leader IBM provides a unified ASSP and ISSP platform, a rich set of pre-designed processes, a large horizontal and industry solution portfolio, and scores strongly across the board.

Because Microsoft plays most strongly in SMB business integration, outside this White Paper’s focus, we comment no further here.

SAP comes from the rather different angle of the largest enterprise application vendor, but does now have a strong and standards-based combined ASSP and ISSP platform underpinned by its NetWeaver technology, which will support its own applications and their integration to other systems.

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6. Summary & Conclusions

Our White Paper’s findings, conclusions and our resulting recommendations for IT users are:

1. **On Demand Means Enterprise Transformation:** Radical changes to enterprise strategies, business models and core processes are needed for On Demand. These enterprise transformations cut costs, speed processes, integrate vertical functions, raise productivity, and provide better service/value to customers, and bring sustainable competitive advantage.

2. **Business Integration at the Heart of On Demand:** Reaping these rich On Demand benefits needs far closer integration of people, processes and information across the “extended enterprise”. Business and systems integration are therefore at the heart of the transformations needed to become On Demand enterprises.

3. **BPM Needed:** Business integration must support the redesign, optimization and operation of the transformed new core processes. Business Performance/Process Management, to manage the new business models and processes are vital. Business analysts must be able to “choreograph” together all elements of the new process, validate and simulate its operation, using Business Process and Integration Modeling (BPM) technologies, and monitor live running results (BAM). These technologies are now available.
4. Unified, Comprehensive and Open Business Integration Software Essential: Complex enterprise distributed IT environments, with these new BPM needs, form a challenging specification for EBI software platforms, and many strands/segments of integration software technology have come together into this category. SMBs have equal needs for business integration, but with simplicity and lower cost foremost considerations. (SMB business integration.)

5. Fragmented EBI Software Market Consolidates, Leaders Offer Full Suites/Gain Share: Previously a fragmented software sector, the business integration market saw much vendor/product consolidation/concentration, acquisitions and failures in recent years. A few vendors with more complete, integrated EBI suites now control over 50% of this market, and are gaining as customers seek quality and security in this turbulent sector. Principal players are IBM (the clear EBI leader), TIBCO Software, webMethods, SeeBeyond, BEA Systems, SAP and Microsoft (SMB business integration leader). The business integration software/closely related services market was worth $2.5B in 2003 and will double in five years, so significant customer business integration investments are being made.

6. Open Standards Central to EBI – J2EE™ & Eclipse Essential Platforms: Most early integration software was proprietary; customers were locked-into products unable to easily inter-operate. More than in any other software category, open-standards are disproportionately crucial in enabling EBI and inter-operation without proprietary lock-in risks. We found two open-standard platforms, J2EE™ and the Eclipse AD tool platform, are now dominant and mandatory open standards for business integration suites. J2EE™ has become the dominant enterprise software platform of this decade, and EBI suites must be deeply rooted in, and comprehensively support it. EBI also requires extensive ADI tooling, and the open Eclipse Platform for AD tools has swept rapidly to prominence offering unique gains to both users and tool developers. We found that EBI suite tools today must be Eclipse-based.

7. Six "Meta-criteria" for EBI Suite/Vendor Selection: In this fast-changing, fiercely competitive EBI software market (that suffered badly in the 2000-2003 business downturn) selecting a strategic, long-term EBI vendor/suite platform is a high-risk, difficult, but crucial task. Marketing hype is widespread and hard to cut through. The normal feature/function comparisons are not enough to guide sound selection. We defined and explained six key meta-criteria: J2EE™ Support, Eclipse Support, Vendor Financial Strength, Road Map Stability/Discontinuities, Richness of Adapters/Connectors/Pre-canned Processes, and Long-term Suite Development/Test Capability. These each represent over-riding customer strategic interests/needs from EBI vendors/suites, and sharply discriminate between the leading players above, as our detailed comparisons and analysis of Section 5 clearly showed.

8. SMB Business Integration Next Market Battleground: Microsoft has been the established SMB business integration leader with its BizTalk and related offerings and large Windows SMB footprint, with little challenge until recently. IBM has now (mid-2004) joined battle with its completed WebSphere Business Integration Express suite, using similar technology as in its EBI offerings, but in simplified, lower-cost, suitably packaged and "out-of-the-box-ready" SMB form. The SMB business integration market is growing faster than EBI, and SMB customers will benefit from the new competition with more choices, faster development and better prices. IBM will mainly address the "M" or "medium business" part of SMB, and we expect it to post similar sharp gains as seen with its other SMB Express software for database and application servers, etc.
Appendix A: EBI Vendor Financial Strength Assessments in Detail

Introduction – Major Players
Unquestioned Financial Strength

The financial strength in revenues, net incomes profit, and R&D expenditure of IBM, Microsoft and SAP are unquestionable, with last three FY revenues of $89.1B, $36.9B and $8.9B, net incomes of $7.6B, $8.2B and $1.4B, and R&D expenditures of $5.1B, $7.8B, and $1.3B respectively. Prospective EBI customers of these vendors need have no concerns as to financial strength and of the executonal ability of these vendors to provide enduring EBI suite support commitment. Our Financial Strength Rating for these three vendors: **Very Strong**.

Other EBI Vendors – Stock Price Guide

We have looked more deeply at the other four vendors, BEA Systems (**BEAS**), TIBCO Software (**TIBX**), webMethods (**WEBM**) and SeeBeyond (**SBYN**), each of which are public companies traded on the NASDAQ market.

Relative stock price histories for the last four years (compared to those at 24th August 2000) are shown in Figure A1. Stock prices and changes reflect the collective investment community view as to the future earnings potential of the company concerned. It determines market capitalization and thus their ability to raise capital for major developments, acquisitions or service expansion. All four of these firms were prime “Internet bubble” stocks that reached high valuations in 2000, which have declined dramatically since. As can be seen, the relative prices for BEA Systems and SeeBeyond have held up better than TIBCO and webMethods. Other “Web technology” companies in different segments have naturally also shown similar price profiles over this turbulent period.

WebMethods held its IPO in February 2000, and SeeBeyond in April 2000, both well timed to raise considerable capital from their floatation’s to fund their acquisitions (webMethods), EBI suite build-outs, and their cash burns.

![Figure A1: Independent Business Integration Software Vendors – Relative Stock Price Trend Shows Market View](image-url)
### Individual Assessment & Ratings

#### BEA Systems

<table>
<thead>
<tr>
<th></th>
<th>FY Ending</th>
<th>1/31/2001</th>
<th>1/31/2002</th>
<th>1/31/2003</th>
<th>1/31/2004</th>
<th>4-Year Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Capitalization</strong></td>
<td>$2,672M</td>
<td>$3,742,203</td>
<td>$1,839,544</td>
<td>$819,760</td>
<td>$934,058</td>
<td>$1,012,492</td>
</tr>
<tr>
<td><strong>Cash &amp; Marketable Securities</strong></td>
<td>$1,580M</td>
<td>$183,954</td>
<td>$17,082</td>
<td>$89,247</td>
<td>$120,875</td>
<td>$132,771</td>
</tr>
<tr>
<td><strong>Revenue $</strong></td>
<td>$1,012,492</td>
<td>$975,893</td>
<td>$934,058</td>
<td>$819,760</td>
<td>$1,012,492</td>
<td>$3,742,203</td>
</tr>
<tr>
<td><strong>Net Income $</strong></td>
<td>$118,674</td>
<td>$35,678</td>
<td>-$3,876</td>
<td>$17,082</td>
<td>$120,875</td>
<td>$89,247</td>
</tr>
<tr>
<td><strong>R&amp;D Spend $</strong></td>
<td>$140,900</td>
<td>$122,711</td>
<td>$132,771</td>
<td>$120,875</td>
<td>$132,771</td>
<td>$483,793</td>
</tr>
<tr>
<td><strong>YTY Revenue Growth %</strong></td>
<td>8.40%</td>
<td>-4.29%</td>
<td>19.05%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Net Income as % Revenue</strong></td>
<td>11.72%</td>
<td>8.98%</td>
<td>-3.66%</td>
<td>2.08%</td>
<td>4.92%</td>
<td>NA</td>
</tr>
<tr>
<td><strong>R&amp;D Spend % Revenue</strong></td>
<td>13.92%</td>
<td>14.21%</td>
<td>12.39%</td>
<td>10.89%</td>
<td>12.93%</td>
<td>NA</td>
</tr>
</tbody>
</table>

BEA System’s four year record, at first sight, shows a sound financial profile for a medium-large ISV. Revenues grew again 8.4% in 2004 after a dip in 2003, and net income ran at a solid 11.7%. R&D spending ran at a high (for this size of firm) 12-14% of revenue for the last three years, reflecting BEA’s high investment in EBI and other developments. The firm is valued at $2,672M (2.86 times last FY revenues), and had cash of $1,580M as above. BEA’s latest quarter results to 31/07/04 saw a 7% total revenue increase, but a worrying 9% fall in software license revenue. Executive exodus, class action law suites, and a stock price halved in the last year, are other signs of stress. Analysts say the firm is suffering harsh competition in a commoditizing application server market. Our Financial Strength Rating: **Weakening**

#### TIBCO Software

<table>
<thead>
<tr>
<th></th>
<th>FY Ending</th>
<th>1/31/2001</th>
<th>1/31/2002</th>
<th>1/31/2003</th>
<th>1/31/2004</th>
<th>4-Year Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Capitalization</strong></td>
<td>$1,286M</td>
<td>$1,108,651</td>
<td>$1,081,834</td>
<td>$1,081,834</td>
<td>$1,081,834</td>
<td>$1,081,834</td>
</tr>
<tr>
<td><strong>Cash &amp; Marketable Securities</strong></td>
<td>$379.3M</td>
<td>$379.3M</td>
<td>$379.3M</td>
<td>$379.3M</td>
<td>$379.3M</td>
<td>$379.3M</td>
</tr>
<tr>
<td><strong>Revenue $</strong></td>
<td>$264,210</td>
<td>$251,797</td>
<td>$219,251</td>
<td>$319,251</td>
<td>$319,251</td>
<td>$1,108,651</td>
</tr>
<tr>
<td><strong>R&amp;D Spend $</strong></td>
<td>$64,588</td>
<td>$60,121</td>
<td>$90,987</td>
<td>$72,344</td>
<td>$72,344</td>
<td>$288,040</td>
</tr>
<tr>
<td><strong>YTY Revenue Growth %</strong></td>
<td>-3.36%</td>
<td>-34.59%</td>
<td>-4.15%</td>
<td>-9.91%</td>
<td>-10.94%</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Net Income as % Revenue</strong></td>
<td>4.33%</td>
<td>-34.59%</td>
<td>-4.15%</td>
<td>-9.91%</td>
<td>-10.94%</td>
<td>NA</td>
</tr>
<tr>
<td><strong>R&amp;D Spend % Revenue</strong></td>
<td>24.45%</td>
<td>28.50%</td>
<td>28.50%</td>
<td>26.46%</td>
<td>26.46%</td>
<td>25.96%</td>
</tr>
</tbody>
</table>

TIBCO Software posted declining revenues for the last two full financial years, had made large losses totaling $121.1M net over the four-year period, an average of 10.9% of revenue, but turned an $11.4 (4.3%) net income in its most recent full FY. R&D spending has run at an extraordinarily high 26% of revenue ($288M) for the 4-year period, reflecting TIBCO’s efforts to build-out its EBI suite and absorb its acquisitions (InConcert Inc., Extensibility Inc., Praja Inc., Talarian and Staffware). The firm is valued at $1,286M (4.87 times last FY revenues), and had cash of $379M as above. TIBCO’s substantial acquisition of Staffware in June 2004 continues its build-out, and now forms the new TIBCO Staffware BPM component of its EBI suite. TIBCO’s most recent quarterly statement to 05/31/2004 showed improved quarterly revenues of $81.2M and net income of $9.6M. Our Financial Strength Rating: **Adequate**

#### webMethods

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Capitalization</strong></td>
<td>$211M</td>
<td>$789,232</td>
<td>$709,578</td>
<td>$719,966</td>
<td>$719,966</td>
<td>$719,966</td>
</tr>
<tr>
<td><strong>Cash &amp; Marketable Securities</strong></td>
<td>$147M</td>
<td>$247,273</td>
<td>$180,819</td>
<td>$201,957</td>
<td>$201,957</td>
<td>$201,957</td>
</tr>
<tr>
<td><strong>Revenue $</strong></td>
<td>$194,525</td>
<td>$195,996</td>
<td>$196,754</td>
<td>$196,754</td>
<td>$196,754</td>
<td>$789,232</td>
</tr>
<tr>
<td><strong>Net Income $</strong></td>
<td>-$27,911</td>
<td>-$131,614</td>
<td>-$82,709</td>
<td>-$82,709</td>
<td>-$82,709</td>
<td>-$250,819</td>
</tr>
<tr>
<td><strong>R&amp;D Spend $</strong></td>
<td>$45,060</td>
<td>$92,515</td>
<td>$62,160</td>
<td>$47,538</td>
<td>$47,538</td>
<td>$247,273</td>
</tr>
<tr>
<td><strong>YTY Revenue Growth %</strong></td>
<td>-1.13%</td>
<td>0.39%</td>
<td>-2.95%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Net Income as % Revenue</strong></td>
<td>-14.35%</td>
<td>-42.20%</td>
<td>-65.17%</td>
<td>-65.17%</td>
<td>-65.17%</td>
<td>NA</td>
</tr>
<tr>
<td><strong>R&amp;D Spend % Revenue</strong></td>
<td>23.16%</td>
<td>31.71%</td>
<td>45.81%</td>
<td>31.33%</td>
<td>31.33%</td>
<td>NA</td>
</tr>
</tbody>
</table>
webMethods posted slightly declining revenues, and has recorded a staggering $250.8M of losses over the four-year period, equivalent to 31.8% of its revenue. R&D spending has run at an extraordinarily high 31.3% of revenue ($247.3M) over the four-year period, reflecting webMethods’ efforts to build-out its EBI suite and absorb its acquisitions (Active Software, The Mind Electric, etc.) and other developments. The firm is valued at $211M (1.08 times last FY revenue) and had cash remaining of $147M as above. WebMethods’ most recent quarterly statement to 06/30/2004 showed declining Q1 revenue at $41.8M (versus $43.8M prior year Q1) and a rising loss rate of $10.8M GAAP. WebMethods has not enjoyed the recent upturns seen by TIBCO and SeeBeyond, and so appears to be losing market ground. Financial markets value its on-going business (market capitalization minus cash) at only $64M, and see weak growth upside, indicated by its low market value to revenue ratio. Our Financial Strength Rating: Strong Caution – Weakening Player

<table>
<thead>
<tr>
<th>SeeBeyond</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Capitalization</td>
<td>$240.7M</td>
<td>08/19/2004</td>
</tr>
<tr>
<td>Cash &amp; Marketable Securities</td>
<td>$64.9M</td>
<td>06/30/2004</td>
</tr>
<tr>
<td>FY Ending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue $</td>
<td>$137,841</td>
<td>12/31/2003</td>
</tr>
<tr>
<td>Net Income $</td>
<td>-$27,498</td>
<td>12/31/2002</td>
</tr>
<tr>
<td>R&amp;D Spend $</td>
<td>$41,012</td>
<td>12/31/2001</td>
</tr>
<tr>
<td>YTY Revenue Growth %</td>
<td>-8.56%</td>
<td>$185,943</td>
</tr>
<tr>
<td>Net Income as % Revenue</td>
<td>-19.95%</td>
<td>-$17,433</td>
</tr>
<tr>
<td>R&amp;D Spend % Revenue</td>
<td>29.75%</td>
<td>-$41,970</td>
</tr>
<tr>
<td></td>
<td>22.85%</td>
<td>$19,175</td>
</tr>
<tr>
<td></td>
<td>15.72%</td>
<td>$123,854</td>
</tr>
<tr>
<td></td>
<td>16.71%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>21.02%</td>
<td>NA</td>
</tr>
</tbody>
</table>

SeeBeyond posted sharply declining revenues for 2002 and 2003 and heavy losses throughout, totaling $110.8M or 18.8% of revenue over the four-year period. R&D spending soared to 29.8% in 2003 and averaged a high 21.0% over the four-year period ($123.8M), as the firm built-out and released its complete next-generation ICAN 5.0 EBI suite in early 2003. The firm is valued at $241M (1.24 times last FY revenue) and had cash remaining of $64.0M as above. SeeBeyond’s most recent Q2 quarterly statement for the quarter ended 06/30/2004 showed strong revenue growth at $41.8M (versus $28.98M prior year) and a small profit ($0.9M). Whilst the smallest of the three pure-play EBI vendors, SeeBeyond has completed its transition to an integrated new-generation EBI suite, and now seems on a growth path. If it can continue its recent strong sales performance, its cash reserves should suffice. However, it will have made itself an attractive but affordable candidate for acquisition by an industry major seeking to expand its EBI offering with a modern suite. (Oracle or Siebel Systems might be candidates, the former if not so preoccupied with its PeopleSoft battle). Our Financial Strength Rating: Caution – Prime Acquisition Target
Appendix B: IBM WebSphere Business Integration – End-to-End Support for On Demand Integration

IBM WebSphere Business Integration Cameo

With $11.2B sales, the IBM Software Group today holds global market leadership in enterprise middleware software. Central to this portfolio, and to the firm’s “e-business on demand™” strategy, is WebSphere Business Integration (WBI). This is the company’s market-leading end-to-end EBI suite, which debuted (in this form) in December 2003, and in SMB BI form (WBI Express) in May 2004. WBI today encompasses:

- MQSeries’ (now WebSphere MQ) 10-year leadership in message orientated middleware (MOM) as a core WBI underpinning.
- A broad and comprehensive, end-to-end ISSP suite, with both enterprise market (EBI) and SMB market versions.
- Cohesive development and run-time environments, for both enterprise and SMB-level business and systems integration.

- Support for advanced, composite Web services-based applications using a SOA.
- Unique in this sector, completely built on open industry standards, notably deep J2EE™ and Eclipse support.
- WBI closely-integrated with WebSphere Application Server/Software Platform, the firm’s global market-share leading ASSP suite.
- A rich collection of 58 predefined and developed industry solutions.
- Over 100 “WBI Collaborations” – pre-defined/tested business processes that cut customer integration effort.
- Available for major IBM and non IBM hardware/operating system platforms: particular strength on zSeries & iSeries

The WebSphere Business Integration Reference Architecture shown in Figure B1 provides an overview of the suite, and some of its main product name.

![WebSphere Business Integration Reference Architecture](image-url)
This WBI reference architecture aligns very closely with Figure 1 on page 2, which showed the broad integration of people, processes and information that is central to “on-demand”. In the WBI architecture, the Interaction Services support people integration, the Process Services support process integration, and the Information Services support information integration. These are truly “on demand” Services, which allow flexible, variable and dynamic integration solutions to be quickly assembled and operated, and equally easily modified or updated, faster and more easily. These services can be composed into new integration applications using sub-components from inside the company (either new business logic, or reused legacy business logic), and with sub-components (services) from outside trading partner organizations (Partner Services).

**WebSphere Business Integration Suite Product Set**

The broad WBI product set is shown, under the six main functions it covers, in Figure B2.

**Our Analysis**

The powerful, flexible, well-structured and layered, open-standards based architecture and broad product suites shown above are the foundations for WebSphere Business Integration’s market leadership and strength.

---

**We expect these strengths will enable the giant to extend its share lead in this important market as consolidation continues, and as business integration remains a top executive priority over the next several years.**

In our assessment, its broad end-to-end capabilities, deep open-standards support (J2EE™ & Eclipse in particular), the rich of range of adapters, industry solutions and pre-built processes it offers, vendor strength/support, and strong technology of both its run-time infrastructure and development tooling, are the principal drivers. High rankings on the six meta-criteria summarised in Section 5 attest to these strong points. A particularly wide range of accelerators, that speed customer time-to-value with integration projects, are also noteworthy.

Competitors have criticized the time it took IBM to integrate and bring to market the full WBI suite, and for the large number of product components it now contains. However, the time spent appears to have been profitably used to integrate the suite well, and the granular product set allows customers to buy just those parts their unique needs require. We expect these strengths will enable the giant to extend its share lead in this important market as consolidation continues, and as business integration remains a top executive priority over the next several years.

---

**IBM WebSphere Business Integration Suite – Q3 2004**

<table>
<thead>
<tr>
<th>Model:</th>
<th>Transform:</th>
<th>Integrate:</th>
<th>Accelerate:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design, plan, simulate bus. Processes</td>
<td>Create new business value from existing IT systems</td>
<td>Link people, processes, systems, applications &amp; data.</td>
<td>Deploy pre-built intelligent business processes.</td>
</tr>
</tbody>
</table>

**Figure B2: IBM WBI Suite – Q3 2004**
Other Related Software Strategies Research


About Software Strategies

Software Strategies is a specialist analyst firm focused on e-Infrastructure platform strategies and issues. Since 1997, we have hosted numerous successful industry events, including our popular Focus Events, and have worked closely with industry leaders, including: IBM; Microsoft; Intel; ICL; Unisys; CA; BMC; Stratus Computers; NetIQ, and many others. Specialist expertise on mainframes, servers, operating systems and e-infrastructure middleware software has been a common thread. Several thousand Enterprise IT users have benefited from our authoritative events, presentations, conferences, newsletters, journals, and reports.

Author

This White Paper was researched and written by Ian Bramley, Managing Director of Software Strategies, and published in September 2004. The views expressed are those of Software Strategies and are based on our proprietary research. Ian founded Software Strategies in 1997, is an experienced enterprise infrastructure analyst, a keynote speaker at many industry events, and has published many reports and papers. He was previously Director of Enterprise Platforms at Butler Group, and Founder/Chairman of the Enterprise NT Management Forum from 1998 to end-2000. Previously, he held a variety of executive positions with international software vendors over a 25-year industry career.

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